

Appl. No. : 09/457,207
Filed : December 7, 1999

REMARKS

Claims 1, 3-5, 8 and 11 are pending in the application and are presented for reconsideration and further examination.

Rejections under 35 U.S.C. §103

In the Office Action, all of the pending claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rahamim (U.S. Patent No. 5,764,694). Applicant respectfully traverses this rejection. Though the following remarks focus on the independent claims, they apply with equal force to each of the rejected claims.

The Rahamim reference, entitled "Self-Testing and Evaluation System," discloses a system designed to "enabl[e] a modem to perform the functions of a self-test and measurement system such that the modem itself can report absolute levels of noise, distortion, and echo." (Rahamim, col. 4, lines 9-12, emphasis added). Thus the modem 110 depicted in Figure 1 is configured to perform test functions on itself. By contrast, the invention described in claim 1 is not a modem itself, and it does not perform a self-testing function. Rather, the claimed device is used to perform test functions on a separate modem located within a computer. For example, it can be used in a production environment to test a large number of modems over time.

Claim 1 recites, *inter alia*, "a first communication port . . . configured to be directly coupled to a modem in a computer thereby forming a primary communication link." An example of the first communication port is depicted in Figure 1 as port 43. The specification discloses embodiments of the invention wherein the first communication port and the primary communication link comprises "a cable. . . such as a typical telephone cable." (Specification, p. 3, lines 2-3). The testing device described in Rahamim is the modem itself, thus obviating any need for a first communication port with a primary communication link, such as a telephone cable, to couple the modem and the testing device. Accordingly, the claimed first communication port and primary communication link do not exist in the system disclosed in Rahamim. The lack of these elements in Rahamim prevents the device of Rahamim from being capable of testing different modems. It can only test itself. Thus, in contrast to the invention described in claim 1, the Rahamim device is not adapted to test a large number of modems over time.

The Office Action asserts that the Rx SIG. between host computer 112 and modem microcontroller 140 in Rahamim corresponds to the claimed primary communication link

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between the modem and the modem testing device of the invention of claim 1. See Paper No. 8, p. 3, paragraph 6. Applicant respectfully submits that as Rahamim discloses a self-testing modem, the modem testing device is inherent in modem 100 itself. In Rahamim, the connection Rx SIG. couples the host computer to the self-testing modem. By contrast, in claim 1, the first communication port is configured to connect a modem within a computer to the modem-testing device. Thus, the Rx SIG. in Rahamim and the claimed primary communication link in claim 1 are not analogous. Therefore, Rahamim does not describe or suggest a testing device including a first communication port "configured to be directly coupled to a modem in a computer," forming a primary communication link.

Claim 1 further recites, *inter alia*, "a second communication port coupled to a signal reporting circuit and configured to be coupled with the computer thereby forming a secondary communication link." An example of the claimed second communication part is shown in Fig. 1 as part 48. The Office Action asserts that the limitation of the second communication port in claim 1 and the secondary communication link are met by the Rx SIG. coupling modem microcontroller 140 and data pump 118 of modem 100 in Rahamim. See, Paper 8, p. 3, paragraph 6; Paper 10, p. 2, paragraph 4. The Office Action asserts that "the signal between 140 and 118 is eventually coupled to the computer via [the connection between elements 112 and 140]." Paper 10, p. 2, paragraph 4. Thus, the Office Action asserts that the "second communication port" and "secondary communication link" of Rahamim necessarily comprises what the Office Action asserts is the "first communication port" and the "primary communication link", namely the Rx SIG. and connections between host computer 112 and modem microcontroller 140. By contrast, the modem testing device of claim 1 includes two separate communication ports and communication links. Rahamim does not. Therefore, Rahamim does not describe or suggest a testing device "including a second communication port." The first and second communication ports of the invention described in claim 1 are configured to accommodate the primary and secondary communication links. The modem testing device of Rahamim does not have two separate communication ports, and accordingly lacks two independent communication links.

Independent claims 5, 8, and 11 were also rejected as being obvious in light of Rahamim. Claims 5, 8 and 11 are directed to a method of testing the operation of a modem in a computer using a portable modem testing device and recite, *inter alia*, "a method of testing the operation of

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a modem. . . comprising coupling the modem in the computer to the portable modem testing device; [and] coupling the computer to the portable modem testing device via an alternate communication link. . .” (Emphasis added). Thus, in the embodiments of claims 5, 8, and 11, two alternate communication links couple the modem testing device; one links to a modem in a computer, and another links to the computer itself, thereby providing the capability to transmit and receive signals across two different links during testing. Claims 5, 8, and 11 also recite, *inter alia*, sending a signal from the modem testing device over the alternate communication link. As discussed above, Rahamim does not describe or suggest a testing device including a “second communication port” or a “secondary communication link.” Unlike the embodiments described in claims 5, 8, and 11, the modem testing device of Rahamim cannot transmit and receive data or signals across two independent communication links.

With regard to all of the rejected claims, Applicant respectfully submits that the Office Action erroneously identifies the microcontroller 140 of the modem as the modem itself. See Paper 8, p. 4, paragraph 9; Paper 10, p. 2, paragraph 5. In fact, the Rahamim specification states that “in preferred embodiments. . . data transmission is controlled by a microcontroller 140 residing within the modem 110. In other. . . embodiments, the modem may not include a controller on-board. (Rahamim, Col. 5, lines 6-8). The microcontroller is not a necessary component of the modem in Rahamim. Therefore, it cannot be the modem.

Claim 1 describes a modem testing device comprising a case, configured to test a modem located within a computer. The testing device of claim 1 is external to the computer, within which the modem to be tested is located. The Office Action asserts that it is “inherent” for a modem testing device “to be within a case to reduce the effects of temperature, humidity, liquid spilling, and other environmental effects.” Paper 8, p. 3, paragraph 6. Rahamim discloses a self-testing modem. Thus, if the modem testing device of Rahamim comprises a case, it necessarily follows that the modem itself is within the case that is external to the computer, and thus external to the modem to be tested.

Rahamim provides no suggestion that an external modem testing device is desirable. To the contrary, Rahamim, when describing prior art systems, expressly points out disadvantages of systems for testing modems that are external to the modem device itself, such as the one disclosed in the present application. (Rahamim, col. 2, lines 41-60). Specifically, Rahamim states that “because the test equipment is external to the modem device, the measurement

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[modem-testing] devices may not be able to report exactly what the modem 'sees' across its signal lines." (Rahamim, col. 2, lines 41-60). Rahamim goes on to state that the "leads and probes of. . . external equipment may. . . introduce noise which. . . clouds the measurement results and thus significantly reduces the accuracy of the results." (Rahamim, col. 2, lines 61-65). Rahamim therein suggests that an external modem testing device is not desirable.

The system disclosed in Rahamim is expressly designed to overcome the cited disadvantages associated with external modem testing devices, by providing a device that reports exactly what the modem sees, and whose design reduces noise associated with external equipment. These features of Rahamim are objects of the invention. The Office Action asserts that it would be obvious to modify the device in Rahamim such that the modem testing device is within a case external to the modem it is testing. However, doing so would render the Rahamim device unsatisfactory for its intended purpose of "reporting what the modem sees" and reducing noise introduced by external equipment. It is improper to attempt to modify Rahamim under 35 U.S.C. §103 to perform a task that would render Rahamim unsatisfactory for its intended purpose. M.P.E.P. 2143.01 (2003). Thus, Rahamim does not provide a proper basis for rejection of claim 1 under 35 U.S.C. §103.

Applicant respectfully submits that Rahamim does not make obvious independent claims 1, 5, 8 and 11, and dependent claims 3 and 4, and that these claims are patentable over Rahamim. Accordingly, Applicant requests allowance of claims 1-5, 8, and 11.

Conclusion

The Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, arguments in support of the patentability of the pending claim set are presented above. In light of the above remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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